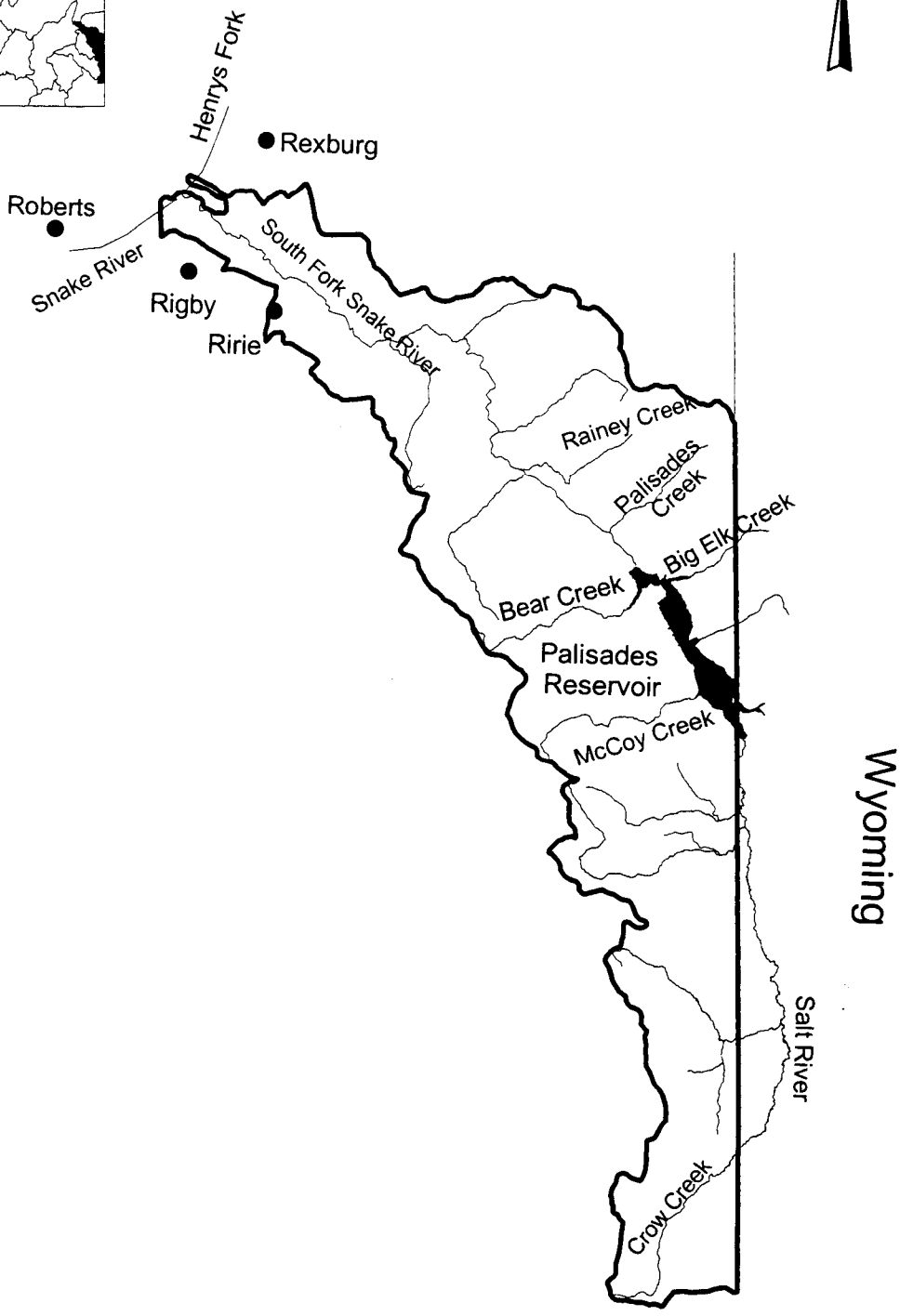
Snake River Drainage

South Fork



31. SOUTH FORK SNAKE RIVER DRAINAGE

A. Overview

The South Fork Snake River drainage includes the mainstem and tributaries from its confluence with the Henrys Fork upstream to the Idaho-Wyoming State boundary. This management drainage area includes Palisades Reservoir and its tributaries and Salt River tributaries, which originate in Idaho (including Jacknife, Tincup, Stump, and Crow creeks).

The South Fork Snake River has been called Idaho's most unique riparian ecosystem containing the largest continuous cottonwood ecosystem in the state. The South Fork provides habitat for nine nesting bald eagle pairs and up to 100 wintering eagles. The U.S. Fish and Wildlife Service considers this river section to be the most important fish and wildlife habitat in the state of Idaho.

In the South Fork Snake River and tributaries below Palisades Dam, wild native cutthroat trout supported 71% of the catch in 1986. Jackson National Fish Hatchery cutthroat trout are stocked in Palisades Reservoir as catchables and sub-catchables and are flushed into the South Fork with reservoir drawdowns. The reservoir recruitment affects only the first 2 to 3 miles of river below Palisades Dam. Brown trout provided only a small portion of the catch (12%) but offer the opportunity to catch a trophy fish. The brown trout catch has remained almost identical since 1979. The present state record brown trout weighing 26.4 lbs was caught from this river.

Special regulations restricting harvest of cutthroat trout were enacted upstream from the Heise Measuring Cable to Irwin in 1984 and to Palisades Dam in 1988. Increased cutthroat trout numbers and fish size in these areas resulted in an estimated 300% increase in fishing effort by 1989. Based on this success, the Upper Snake restricted cutthroat trout harvest regulation was implemented in 1990 and included the lower South Fork (below Heise) and all tributaries. The two fish, 8- to 16-inch slot limit was extended to all trout species in the mainstem in 1992. In 1996 a comprehensive creel survey was conducted to measure changes in the fishery since the last survey in 1982. Total angling effort increased by 318%, the total catch increased by 396% and the total harvest decreased by 84%. In 2000 the special regulation was modified to a two fish, none under 16-inch rule. Rainbow trout and rainbow trout x cutthroat trout hybrid trout were also placed under general harvest rules for cutthroat trout conservation.

Although exotic wild rainbow trout and their hybrids, provide a component of the catch throughout the South Fork drainage, they pose a threat to the genetic integrity and long-term viability of wild cutthroat trout populations. Stocking in the mainstem and tributaries was discontinued in the early 1980s. A research initiative was begun in 1996 to determine the status of the rainbow trout and rainbow trout x cutthroat hybrid trout populations and describe where and when rainbow trout, hybrid and cutthroat trout are spawning. Rainbow trout and hybrid trout use mainstem side channel habitat almost exclusively for spawning while cutthroat trout use both mainstem side channel and tributary habitat extensively. Following these results, a intensive tributary management program is being implemented to reserve Burns Creek, Pine Creek, Rainey Creek, and Palisades Creek exclusively for cutthroat trout spawning and production. Fish screening was implemented

in 1994 on Palisades Creek. The Department constructed improved irrigation diversion structures incorporating fish passage and fish trapping capabilities on Rainey Creek in 1997, Palisades Creek in 1999, and Burns Creek in 2000. Permanent tributary weir and trapping facilities will allow regional personnel to block escapement of rainbow trout and hybrid spawners and allow passage of genetically pure cutthroat trout spawners. Genetic research has confirmed low levels of introgression in the South Fork population and we have documented near 100% accuracy in field identification of genetically pure cutthroat trout. As a matter of policy, Department personnel will remove rainbow trout and hybrid trout from the river in the course of all management activities in the South Fork watershed and release them in waters where there is no threat to cutthroat trout.

Mountain whitefish are the most abundant game fish in the drainage but are not extensively utilized by anglers. Through the adoption of fishing contest regulations in 1989, the Department and sportsman groups have sponsored whitefish derbies to enhance angler awareness and utilization of whitefish. We will continue to pursue innovative opportunities to promote the value of whitefish to the angling community.

Habitat in the South Fork main-stem is generally in good condition. Winter flow releases, regulated to manage Palisades Reservoir storage, have resulted in significant de-watering of secondary channels of the South Fork. The de-watering causes major losses of juvenile salmonids during winter. De-watering during the late 1980s resulted in reduction of the cutthroat trout population, which temporarily offset gains made through harvest regulation. A multi-agency study completed in 1992 defined a minimum winter flow release of 1,500 cfs at Palisades Dam. Implementation of this minimum stream flow will enhance long-term population stability.

The lower 20 miles of the river is impacted by low water during late fall and winter due to irrigation diversions and reduced flows from Palisades Reservoir. Loss of fish from the river to these irrigation diversions often creates good seasonal fisheries. One such canal, an old side channel of the river called the Great Feeder or Dry Bed, utilized as a feeder canal, is 20 miles in length and provides adequate habitat to support a fishery. De-watering of the Dry Bed annually in the spring for head-gate maintenance results in a loss of fish and a salvage season is in affect.

Palisades Reservoir provides fishing opportunity for bank, boat and ice fishermen. Fishing effort was 22,500 angler hours during 1993. Lake trout and kokanee have been introduced, but only small natural populations have developed. Large fluctuation in water levels (up to 80 vertical feet) may affect these open water species.

Size, brood source, and location of stocking hatchery cutthroat trout are being fine tuned in cooperation with Wyoming Game and Fish and the U.S. Fish and Wildlife Service to produce higher catch rates on the reservoir. Presence of mysis shrimp was documented for the first time in 1994 while trawling for kokanee. Mysis density was low and will be monitored concurrent with future trawling efforts for kokanee. The Big Elk Creek kokanee spawning run will be monitored, but no further kokanee introductions will be made under agreement with Wyoming Game and Fish.

Tributary streams to the South Fork and Salt River can benefit from habitat restoration and modified grazing management for riparian restoration.

Salt River (Wyoming) tributaries, which originate in Idaho include Jacknife, Tincup, Stump, and Crow creeks. These tributaries will be managed for restricted cutthroat trout harvest to restore populations. Fisheries interaction between the Salt River and its tributaries and Palisades Reservoir is not clearly understood. Idaho is cooperating with Wyoming to define fish movements to better manage this system.

B. Objectives and Programs

1. Objective: Preserve genetic integrity and population viability of wild native cutthroat trout.

   Program: Do not stock or allow stocking of streams, rivers, reservoirs or ponds with other species of fish that will interbreed or compete with cutthroat trout.

   Program: Complete construction and operate fish trapping weirs on Burns, Pine, Rainey, and Palisades creeks to manage those tributaries strictly for cutthroat trout spawning and production.

   Program: Continue to monitor genetic status of wild cutthroat trout populations.

   Program: Work to obtain special consideration, protection, and improvement of critical cutthroat trout habitat in land use decisions.

   Program: Protect cutthroat trout through at least one spawning season by late openers on important tributaries, minimum size limits, and reduced bag limits.

2. Objective: Obtain adequate winter stream flows to reduce juvenile fish mortality.

   Program: Work with Bureau of Reclamation to maintain at least 1500 cfs release from Palisades Dam during winter. Establish ramping rates to minimize water level fluctuations.

3. Objective: Monitor incidence of fish disease and minimize its threat to wild trout populations.

   Program: Continue to monitor for presence of whirling disease.

   Program: Educate private pond owners on the threat of whirling disease and strictly enforce fish transport regulations.

   Program: Educate the public on the threat of whirling disease and methods to control its spread.

4. Objective: Minimize loss of juvenile fish to irrigation diversions and stream dewatering.

   Program: Operate and maintain the Palisades Creek and Burns Creek screens in cooperation with local irrigators.

   Program: Negotiate with local irrigators for maintenance flows when possible.

5. Objective: Minimize impacts of land use and development on fish habitat and water quality.

Program: Work with government agencies, private landowners, developers, and interested conservation groups to make protection and enhancement of fish habitat and water quality a primary concern in land use decisions.

Program: Ensure restoration of habitat or mitigation of habitat loss whenever possible.

6. Objective: Improve angler compliance with special regulations.

Program: Develop informational programs to encourage compliance. Educate anglers on the need for regulations, the kinds and location of regulations, and alternative fishing opportunities.

Program: Focus available enforcement to reduce poaching losses.

5. Objective: Maintain a satisfactory salmonid fishery in Palisades Reservoir.

Program: Continue stocking hatchery cutthroat trout from Jackson National Fish Hatchery of a variety and size and on a schedule, which provides high quality fishing with economic efficiency.

6. Objective: Maintain adfluvial cutthroat trout populations in Palisades Reservoir.

Program: Maintain restrictive harvest rules for cutthroat trout and consider late season openers in principal spawning tributaries if monitoring and/or public desires indicates need for doing so.

Program: Evaluate agency and private stockings of fish in the drainage for possible negative effects on native cutthroat trout, restrict and or comment on accordingly.

Program: Provide habitat and stream flow protection and enhancement.

DRAINAGE: South Fork Snake River

Water	Miles/acres	Fishery			Management Direction
		Type	Species present	Management	
Mouth to Heise	23/	Coldwater	Cutthroat trout Brown trout Rainbow trout Whitefish	Quality General	Upper Snake cutthroat trout with restricte harvest regulation. Maintain overall catch rates a 0.7 fish/hr. Emphasize rainbow trout and whitefis harvest.
Heise to Palisades Dam	40/	Coldwater	Cutthroat trout Brown trout Rainbow trout Whitefish	Quality General	Upper Snake cutthroat trout with restricte harvest regulation Maintain overall catch rates a 1.0 fish/hr with 10% larger than 16 inches i population. Emphasize rainbow trout an whitefish harvest.
Dry Bed Canal	32/	Coldwater	Cutthroat trout Rainbow trout Brown trout Whitefish	General (not protected in canals)	Put-and-grow fishery with rainbow trout belov Lewisville. April salvage season Lewisville t Ririe. Minimize de-watering through agreement with irrigation districts.
Burns, Pine, Rainey, and Palisades creeks	38/	Coldwater	Cutthroat trout Rainbow trout	Quality General	Upper Snake cutthroat trout restricted harves regulation. Conserve resident cutthroat trou populations. Manage exclusively for cutthroa trout production. Enhance stream habitat an cutthroat trout recruitment with riparian livestoc management and diversion screening.
McCoy Creek and tributaries	35/	Coldwater	Cutthroat trout Brown trout	Quality General	Delayed opener to protect cutthroat trou spawning. Habitat protection from mine impacts.
Tincup Creek from Idaho line to Highway 34 Bridge	12/	Coldwater	Cutthroat trout Brown trout	Quality General	Stock fall spawning hatchery rainbow trout i segment heavily altered by road constructio Evaluate returns.
Tincup Creek from Highway 34 Bridge to Headwater	8/	Coldwater	Cutthroat trout Brown trout	Quality General	Maintain "semi-primitive" access to the fishery Develop hatchery rainbow trout managemer zone and evaluate returns.
Stump Creek and tributaries	12/	Coldwater	Cutthroat trout Brown trout Brook trout	Quality General	Work with federal agencies on habita rehabilitation. Develop hatchery rainbow trou management zone and evaluate returns.
Crow Creek and tributaries	25/	Coldwater	Cutthroat trout Brown trout	Quality General	Investigate development of quality brown trou fishery in Sage Creek in conjunction with habita improvement. Develop hatchery rainbow trou management zone and evaluate returns.
Jacknife Creek and tributaries	12/	Coldwater	Cutthroat trout Brown trout	Quality General	Assess needs for habitat improvement program.

All other tributaries	354/	Coldwater	Cutthroat trout	Quality	Upper Snake restricted cutthroat trout harvest regulations Enhance habitat with riparian livestock management.
Palisades Reservoir	/16, 50	Coldwater	Cutthroat trout Brown trout Lake trout Kokanee	General	Put-and-grow fishery for cutthroat trout. Only cutthroat trou will be stocked. Maintain average size of cutthroat trout o 14 inches. Remnant kokanee population in Big Elk Creek.
Upper and Lower Palisades Lakes	/16	Coldwater	Cutthroat trout	Wild trout	Manage for wild trout benefits. Maintain catch rate at 0.6 fish/hr.